

1 *Claims*

2 1. A composite video signal separation device, comprising
3 a delay memory for storing a composite signal, and configured to output multiple
4 delayed versions of said composite signal;
5 multiple demodulators, coupled to said delay memory, and configured to
6 demodulate said multiple delayed versions of said composite signal by a sub-carrier,
7 generating multiple complex baseband signals;
8 a vertical signal processing block, coupled to said multiple demodulators, and
9 configured to process said multiple complex baseband signals, and configured to output a
10 first separated signal;
11 a modulator, coupled to said vertical signal processing block, and configured to
12 modulate said first separated signal, generating a remodulated signal;
13 a subtraction means, coupled to said modulator and configured to subtract said
14 remodulated signal from one of said multiple delayed versions of said composite signal,
15 generating a second separated signal.

1 2. A composite video signal separation device, comprising
2 a delay memory for storing a composite signal, and configured to output multiple
3 delayed versions of said composite signal;
4 multiple demodulators, coupled to said delay memory, and configured to
5 demodulate said multiple delayed versions of said composite signal by a sub-carrier,
6 generating multiple complex baseband signals;
7 a vertical signal processing block, coupled to said multiple demodulators, and
8 configured to process said multiple complex baseband signals, and configured to output a
9 first separated signal and a second separated signal;
10 a modulator, coupled to said vertical signal processing block, and configured to
11 modulate said first separated signal, generating a remodulated signal;
12 a subtraction means, coupled to said modulator and configured to subtract said
13 remodulated signal from one of said multiple delayed versions of said composite signal,
14 generating a third separated signal.

1 3. A composite video signal separation device, comprising
2 a delay memory for storing a composite signal, and configured to output multiple
3 delayed versions of said composite signal;
4 multiple demodulators, coupled to said delay memory, and configured to
5 demodulate said multiple delayed versions of said composite signal by a sub-carrier,
6 generating multiple demodulated signals;
7 multiple horizontal signal processing blocks, coupled to said multiple
8 demodulators, and configured to process said multiple demodulated signals, generating
9 multiple complex baseband signals;
10 a vertical signal processing block, coupled to said multiple horizontal signal
11 processing blocks, and configured to process said multiple complex baseband signals,
12 and configured to output a first separated signal;
13 a modulator, coupled to said vertical signal processing block, and configured to
14 modulate said first separated signal, generating a remodulated signal;
15 a subtraction means, coupled to said modulator and configured to subtract said
16 remodulated signal from one of said multiple delayed versions of said composite signal,
17 generating a second separated signal.

1 4. A method for composite video signal separation, comprising the following steps:
2 obtaining samples of a composite signal;
3 storing said samples in a delay memory;
4 demodulating multiple samples from said delay memory by a subcarrier to form
5 multiple complex baseband signals;
6 vertically processing said multiple complex baseband signals to form a first
7 separated signal;
8 modulating said first separated signal by a subcarrier to form a remodulated
9 signal; and
10 subtracting said remodulated signal from one of said samples of said composite
11 signal to form a second separated signal.

1 5. A method for composite video signal separation, comprising the following steps:
2 obtaining samples of a composite signal;
3 storing said samples in a delay memory;
4 demodulating multiple samples from said delay memory by a subcarrier to form
5 multiple complex baseband signals;
6 vertically processing said multiple complex baseband signals to form a first
7 separated signal and a second separated signal;
8 modulating said first separated signal by a subcarrier to form a remodulated
9 signal; and
10 subtracting said remodulated signal from one of said samples of said composite
11 signal to form a third separated signal.

1 6. A method for composite video signal separation, comprising the following steps:
2 obtaining samples of a composite signal;
3 storing said samples in a delay memory;
4 demodulating multiple samples from said delay memory by a subcarrier to form
5 multiple demodulated signals;
6 horizontally processing said multiple demodulated signals to form multiple
7 complex baseband signals;
8 vertically processing said multiple complex baseband signals to form a first
9 separated signal;
10 modulating said first separated signal by a subcarrier to form a remodulated
11 signal; and
12 subtracting said remodulated signal from one of said samples of said composite
13 signal to form a second separated signal.